ORAL ARGUMENT SCHEDULED FOR MAY 16, 2024

No. 23-1173

IN THE

United States Court of Appeals for the District of Columbia Circuit

INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA,

Petitioner,

v.

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION AND UNITED STATES DEPARTMENT OF TRANSPORTATION,

Respondents,

On Petition for Review of a Final Rule from the United States Department of Transportation and Pipeline and Hazardous Materials Safety Administration

FINAL BRIEF FOR PETITIONER INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

CATHERINE E. STETSON
SEAN MAROTTA
MATTHEW J. HIGGINS
KEENAN ROARTY
HOGAN LOVELLS US LLP
555 Thirteenth Street, N.W.
Washington, D.C. 20004
(202) 637-5491
cate.stetson@hoganlovells.com

Counsel for Petitioner Interstate Natural Gas Association of America

April 1, 2024

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

A. PARTIES

The following are parties in this Court:

a. Petitioner: Interstate Natural Gas Association of America (INGAA).

b. Respondents: United States Department of Transportation and Pipeline and Hazardous Materials Safety Administration (PHMSA).

There are no *amici* or intervenors.

B. CORPORATE DISCLOSURE STATEMENT

INGAA is an incorporated, not-for-profit trade association representing virtually all interstate natural gas pipeline companies operating in the United States. INGAA has no parent companies, subsidiaries, or affiliates that have issued publicly traded stock. Most INGAA member companies are corporations with publicly traded stock.

INGAA has 26 member companies. They are: BHE GT&S; Boardwalk Pipelines; Cheniere Energy, Inc.; DT Midstream; DTE Energy; Eastern Shore Natural Gas; Enbridge Energy; Equitrans Midstream; Iroquois Pipeline Operating Company; Kinder Morgan, Inc.; Millennium Pipeline Company, LLC; Mountain West Pipeline; National Grid; National Fuel Gas Supply Corporation; NextEra Energy; ONEOK, Inc; Pacific Gas and Electric; Sempra LNG; Southern Company Gas; Southern Star Central Gas Pipeline, Inc.; Spire, Inc.; TC Energy; Tellurian,

Inc.; The Williams Companies; UGI Energy Services, LLC; and WBI Energy Transmission, Inc.

C. RULINGS UNDER REVIEW

INGAA seeks review of five standards contained within PHMSA's Final Rule entitled *Pipeline Safety: Safety of Gas Transmission Pipelines: Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments*, 87 Fed. Reg. 52,224 (Aug. 24, 2022). PHMSA issued technical corrections and responded to petitions for reconsideration in April 2023. *See Pipeline Safety: Safety of Gas Transmission Pipelines: Repair Criteria, Integrity Management Improvements, Cathodic Protection, Management of Change, and Other Related Amendments; Technical Corrections; Response to Petitions for Reconsideration*, 88 Fed. Reg. 24,708 (Apr. 24, 2023).

D. RELATED CASES

Counsel is not aware of any related cases within the meaning of Circuit Rule 28(a)(1)(C).

/s/ Catherine E. Stetson
Catherine E. Stetson

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GLOSSARY

1.25-times-MAOP standard	Immediate repair requirements codified at 49 C.F.R. § 192.714(d)(1)(v)(C) and § 192.933(d)(1)(v)(C)
ANSI	American National Standards Institute
APA	Administrative Procedure Act
ASME	American Society of Mechanical Engineers
Corrosive-constituent standard	Requirement for pipelines to monitor "corrosive constituents," codified at 49 C.F.R. § 192.478(a)
ERW	Electric Resistance Welded
GPAC	Gas Pipeline Advisory Committee
HF-ERW	High-Frequency Electric Resistance Welded
HF-ERW standard	Requirement to immediately repair metal loss on the seams of HF-ERW pipe, codified at 49 C.F.R. § 192.714(d)(1)(iv) and § 192.933(d)(1)(iv)
INGAA	Interstate Natural Gas Association of America
LF-ERW	Low-Frequency Electric Resistance Welded
MAOP	Maximum Allowable Operating Pressure
NPRM	Notice of Proposed Rulemaking
PHMSA	Pipeline and Hazardous Materials Safety Administration
PRIA	Preliminary Regulatory Impact Assessment
RIA	Regulatory Impact Analysis

Safety-factor-5 standard	Requirement for pipelines to use a "safety factor of 5 or greater for the assessment interval," codified at 49 C.F.R. § 192.712(c)(9)
SCC	Stress Corrosion Cracking
SCCDA	Stress Corrosion Cracking Direct Assessments
SCCDA-pipeline-segment standard	Requirement for pipelines to conduct a minimum of three direct examinations within "the covered pipeline segment," codified at 49 C.F.R. § 192.929(b)(3)

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Respondents,

On Petition for Review of a Final Rule from the United States Department of Transportation and Pipeline and Hazardous Materials Safety Administration

FINAL BRIEF FOR PETITIONER INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

JURISDICTIONAL STATEMENT

The Pipeline and Hazardous Materials Safety Administration (PHMSA) denied the Interstate Natural Gas Association of America's (INGAA's) petition for reconsideration on April 24, 2023. JA724 (Final Rule Technical Corrections, 88 Fed. Reg. 24,708 (Apr. 24, 2023)). INGAA timely petitioned for review on July 10, 2023. *See* 49 U.S.C. § 60119(a)(1) (requiring petitions to be filed within 89 days); *I.C.C. v. Brotherhood of Locomotive Engineers*, 482 U.S. 270, 284-285 (1987) (timely petition for administrative reconsideration tolls time to petition for review). This Court has jurisdiction under 49 U.S.C. § 60119(a).

INTRODUCTION

In *GPA Midstream Association v. United States Department of Transportation*, 67 F.4th 1188 (D.C. Cir. 2023), this Court held that PHMSA's new safety standards for gas gathering were procedurally flawed and substantively unreasonable. As this Court explained, PHMSA had failed to subject its proposed safety standards to a preliminary cost-benefit analysis, as required by statute—rendering it procedurally deficient. *Id.* at 1196-98. And PHMSA's final gas gathering rule had failed to adequately explain why its benefits justified its costs—rendering it unreasonable. *Id.* at 1999-1202.

Four months after PHMSA issued the final rule this Court later vacated in *GPA Midstream*, it issued a different sweeping final rule making hundreds of changes to the Federal Pipeline Safety Regulations, codified at 49 C.F.R. Part 192 and governing safety standards for gas transmission pipelines. INGAA and its members supported this rule in great part. But, INGAA explained to PHMSA, a handful of new safety standards—of the approximately 275 changes that the Final Rule codified—provided little to no safety benefit and imposed massive costs on pipeline operators.

PHMSA finalized these standards anyway, along with additional unsupported and brand-new standards. *See* JA563-618 (Final Rule, 87 Fed. Reg. 52,224-79 (Aug. 24, 2022)). INGAA challenges five of those standards here on

both procedural and substantive grounds. Procedurally, four of PHMSA's five contested standards failed to offer a preliminary cost-benefit analysis, violating 49 U.S.C. § 60102(b)(3)(B)'s command and committing the same error that this Court identified in *GPA Midstream*, 67 F.4th at 1196-98. The fifth standard was also procedurally defective; PHMSA failed to consider the recommendations of the Technical Pipeline Safety Standards Committee (aka the Gas Pipeline Advisory Committee (GPAC)), as the governing statute requires. PHMSA also failed to properly notice two of its five contested standards, as required under the Administrative Procedure Act (APA).

PHMSA's five contested standards fare no better on substance. *All five* of these final standards failed to reasonably explain why their benefits "justify" their costs, 49 U.S.C. § 60102(b)(5)—just as PHMSA failed to do in *GPA Midstream*. 67 F.4th at 1199-1201. PHMSA asserted it had no legal obligation to conduct a targeted cost-benefit analysis for its specific safety standards. *GPA Midstream* soundly rejected PHMSA's loose interpretation of its statutory obligation. Section 60102(b)(5) requires that PHMSA make a "reasoned determination that the benefits" of an intended standard "justify its costs." That requirement is demanding, and PHMSA fails to satisfy it—just like in *GPA Midstream*.

This Court should sever and vacate PHMSA's five contested standards contained within the omnibus Final Rule. The hundreds of other safety standards that the Final Rule codifies can and should remain in effect.

ISSUES PRESENTED

1. Whether the HF-ERW standard, the 1.25-times-MAOP standard, the SCCDA-pipeline-segment standard, and the safety-factor-5 standard should be vacated because PHMSA never conducted a preliminary cost-benefit assessment for these standards, as 49 U.S.C. § 60102(b)(3)(B) requires.

2. Whether PHMSA's corrosive-constituent standard should be vacated because PHMSA failed to consider GPAC's "recommendation," as 49 U.S.C. § 60102(b)(2)(G) requires.

3. Whether PHMSA's safety-factor-5 standard should be vacated because the topic it regulates is wholly absent from PHMSA's notice of proposed rulemaking.

4. Whether PHMSA's 1.25-times-MAOP standard should be vacated because PHMSA's notice of proposed rulemaking expressly disavowed any intention of changing the standard it subsequently changed.

5. Whether all five of PHMSA's contested standards should be vacated on merits grounds because they failed to make a "reasoned determination that the

benefits" of the standards "justify" their costs, as 49 U.S.C. § 60102(b)(5) requires, or were otherwise unreasonable under this Court's precedents.

STATEMENT OF THE CASE

I. KEY PLAYERS.

Congress delegates responsibility to "prescribe minimum safety standards for pipeline transportation" to the Secretary of Transportation. *See* 49 U.S.C. § 60102(a)(2). The Secretary delegates that authority to PHMSA. *See* 49 C.F.R. § 1.97.

49 U.S.C. § 60115 establishes and sets out the duties of GPAC,[1] which is composed of 15 members. Those members are appointed by the Secretary of Transportation, *id.* § 60115(b)(1), and represent a mix of governmental agencies, industry representatives, and the public, *id.* § 60115(b)(3). GPAC is responsible for conducting peer reviews and advising PHMSA on the "technical feasibility, reasonableness, cost-effectiveness, and practicability" of its proposed safety standards. *Id.* § 60115(c)(2). PHMSA is required to consider "the comments and recommendations of [GPAC]" when promulgating rules. *Id.* § 60102(b)(2)(G).

[1] *See also* PHMSA, *Gas Pipeline Advisory Committee (GPAC) Charter – October 2022 to October 2024* (Nov. 14, 2022), https://www.phmsa.dot.gov/standards-rulemaking/pipeline/gas-pipeline-advisory-committee-gpac-charter-october-2022-october-2024

Petitioner INGAA is a trade association representing virtually all major interstate natural gas pipeline companies operating in the United States. Pipeline safety is a top priority for INGAA and its members. JA359 (INGAA Comments 7) (AR PHMSA-2011-0023-0407).[2] INGAA regularly works with PHMSA, as well as state regulators and other public advocacy groups, to help develop standards that promote safe pipeline practices while maintaining the reliable delivery of natural gas. JA359-360 (INGAA Comments 7-8). Its members are listed on pages (i) and (ii) of this brief.

II. STANDARDS UNDER REVIEW.

In August 2011, PHMSA initiated an advance notice of proposed rulemaking seeking broad comments on whether "changes [were] needed to the regulations governing the safety of gas transmission pipelines." JA1 (76 Fed. Reg. 53,086, 53,086 (Aug. 25, 2011)). Five years later, PHMSA issued its notice of proposed rulemaking (NPRM) proposing extensive changes to the Federal Pipeline Safety Regulations, codified at 49 C.F.R. Part 192. JA4-138 (NPRM, 81 Fed. Reg. 20,722-20,856 (Apr. 8, 2016)). INGAA provided formal comments on PHMSA's proposal. JA357-388 (INGAA Comments 1-219). GPAC members met several times between 2017 and 2018, submitting a series of recommended changes to

[2] "JA" refers to the Joint Appendix. Citations beginning with "AR" refer to PHMSA's administrative docket.

PHMSA's proposal. *E.g.*, JA541-546 (GPAC Meeting Final Voting Slides 1-52) (AR PHMSA-2011-0023-0656).

PHMSA issued its Final Rule in August 2022, JA563-618 (Final Rule, 87 Fed. Reg. 52,224-79), along with its final Regulatory Impact Analysis (RIA), JA619-672 (AR PHMSA-2011-0023-0637). INGAA "strongly support[ed]" the Final Rule and "publicly championed" its finalization. JA676 (Petition for Reconsideration 1) (AR PHMSA-2011-0023-0641). Out of the Final Rule's hundreds of new requirements, INGAA petitioned PHMSA to reconsider or clarify just a handful. The background relevant to the five standards INGAA challenges in this petition for review is set out below.

A. PHMSA's new requirement to monitor potentially "corrosive constituents" ("corrosive-constituent standard").

First, PHMSA's Final Rule amends 49 C.F.R. § 192.478(a) to require pipelines to monitor "corrosive constituents" in the gas they transport. *See* JA609 (Final Rule, 87 Fed. Reg. at 52,270)

1. Technical background.

For years, 49 C.F.R. § 192.477 has required natural-gas pipelines to monitor "corrosive gas," a catch-all term for any gas containing "[k]nown causes of internal corrosion." *In re: Consumers Energy Co. (F/K/A Mich. Gas Storage Co.)*, 2009 WL 7796885, at *2 (D.O.T. Mar. 5, 2009). Corrosive gas can cause the pipeline's internal walls to corrode, or "thin[]." *Pipeline Safety: Internal Corrosion in Gas*

Transmission Pipelines, 65 Fed. Reg. 53,803, 53,803 (Sept. 5, 2000). Corrosive gas commonly contains "condensates," that is, condensed or liquified water that combines with other substances, such as hydrogen sulfide or carbon dioxide, and then "settle[s] out of the gas stream." *Id.* As these condensates, or other "sediment deposits," travel through or settle in a pipeline, they can corrode its interior walls. *Id.*

Since at least September 2000, pipeline operators have monitored and mitigated corrosive gas in a number of ways. They analyze and measure water content, *id.*; they test the existence and severity of internal corrosion by inspecting the condition and thickness of the pipeline walls, *id.*; they pay special attention to pipeline segments near "gas production and storage fields," where corrosive gas is most likely to exist, *id.*; they closely review conditions in pipeline segments with "sharp bends," which can "restrict" velocity and contribute to corrosive condensates settling out of the gas stream; and they measure corrosion rates in areas where they have reason to believe internal corrosion occurs. *Id.* Pipeline operators also assess levels of carbon dioxide and hydrogen sulfide—not by themselves corrosive—through periodic sampling of the gas stream. JA372 (INGAA Comments 116).

2. PHMSA proposes that pipelines be required to monitor corrosive constituents and estimates it will cost $400,000.

PHMSA's 2016 NPRM proposed adding 49 C.F.R. § 192.478 (previously reserved) to require gas transmission pipelines to "develop and implement a monitoring and mitigation program to identify potentially *corrosive constituents* in the gas being transported and mitigate the corrosive effects." JA112 (NPRM, 81 Fed. Reg. at 20,830) (emphasis added). "Corrosive constituents" include any substance—by itself innocuous—that could potentially become corrosive when combined with other substances. Potentially corrosive constituents "include but are not limited to: carbon dioxide, hydrogen sulfide, sulfur, microbes, and free water, either *by itself* or in combination." *Id.* (emphasis added). Section 192.478 marks the first time that PHMSA has required pipelines to monitor "corrosive constituents," not just "corrosive gas." On top of that, PHMSA proposed requiring pipelines to monitor gas with corrosive constituents at any of the *hundreds* of points that such gas "enters the pipeline," rather than with less burdensome, but effective, sampling methods. *Id.* (proposed Section 192.478(b)(1)).

PHMSA's Preliminary Regulatory Impact Assessment (PRIA)—issued in conjunction with its NPRM—analyzed the estimated costs and benefits of its proposed corrosive-constituent standard. PHMSA acknowledged that its proposed standard would require specific monitoring equipment, "including but not limited to, a moisture analyzer, chromatograph, carbon dioxide sampling, and hydrogen

sulfide sampling." JA226 (PRIA 88) (AR PHMSA-2011-0023-0117). But, PHMSA assumed, "many operators already have" the required equipment. JA228 (PRIA 90). PHMSA thus concluded that "the added cost of monitoring for CO2, sulfur, water, and other chemicals is either nothing or relatively inexpensive." *Id.* PHMSA opined that the average price of each new piece of required monitoring equipment was $10,000, and that such equipment was needed at only 40 locations (in total, for the entire country). JA229 (PRIA 91 (Table 3-75)). PHMSA's total estimated cost for the corrosive-constituent standard was $400,000. *Id.*

For estimated benefits, PHMSA calculated that the corrosive-constituent standard would "avert approximately three [pipeline safety] incidents per year." JA264 (PRIA 126). PHMSA estimated that each incident cost an average of $300,000, JA265 (PRIA 127), resulting in $900,000 per year of savings.

3. INGAA alerts PHMSA that its proposed corrosive-constituent standard will cost pipelines more than $75 million, and GPAC recommends against it.

INGAA's July 2016 comment letter directly challenged PHMSA's assumption that "the added costs of monitoring [corrosive constituents] is either nothing or relatively inexpensive." JA373 (INGAA Comments 117) (citation omitted). INGAA explained that for many pipelines, a new monitoring system would cost "approximately $250,000 at each point." *Id.* INGAA estimated that prices for newly-required monitoring equipment would range from $30,000 to

$350,000, JA392 (INGAA Cost Analysis 35) (AR PHMSA-2011-0023-0383, Attach. #6), far exceeding the $10,000 per unit that PHMSA estimated.

INGAA's cost analysis also showed that *830* new monitoring systems were needed under PHMSA's proposal to monitor corrosive constituents at each receipt point, *id.*, orders of magnitude more than the 40 new systems that PHMSA estimated. JA229 (PRIA 91). With 830 new monitoring systems costing between $30,000 and $350,000, INGAA calculated that PHMSA's proposed corrosive-constituent standard would cost $75,500,000 to implement. JA392 (INGAA Cost Analysis 35) ("PHMSA dramatically underestimates monitoring equipment costs."); *see also* JA384-385 (INGAA Comments 203-204).

GPAC—the entity responsible for advising PHMSA on its proposed safety standards—recommended that Section 192.478(a) be limited to "the transportation of corrosive gas," not corrosive constituents. JA542 (GPAC Meeting Final Voting Slides 9). One GPAC member explained that requiring pipelines to monitor corrosive constituents at every receipt point would add little benefit because corrosive constituents by themselves do not cause internal corrosion unless water is present, and pipelines already control and monitor the amount of water in their systems. JA474-475 (GPAC Meeting Transcript 210-211 (June 6, 2017) (Zamarin Statement)) (AR PHMSA-2011-0023-0660). GPAC members further requested that PHMSA provide data supporting its proposal and clarify the magnitude of the

problem. JA414, JA417 (GPAC Meeting Transcript 275, 278 (Jan. 11, 2017) (Campbell and Zamarin Statements)) (AR PHMSA-2011-0023-0660).

4. PHMSA finalizes its corrosive-constituent standard.

Despite GPAC's input and INGAA's alarming cost analysis, PHMSA finalized Section 192.478's new requirement to monitor corrosive constituents without meaningful changes. JA609 (Final Rule, 87 Fed. Reg. at 52,270). In response to comments from GPAC and others, PHMSA's preamble to the Final Rule declared that it would "limit [the final standard's] applicability to the transportation of corrosive gas," parroting the language from GPAC's recommendation. JA577 (Final Rule, 87 Fed. Reg. at 52,238). But PHMSA made no such changes; Section 192.478(a)'s final language still required pipelines to monitor and "evaluate the partial pressure of each corrosive constituent." *Compare* JA609 (Final Rule, 87 Fed. Reg. at 52,270), *with* JA112 (NPRM, 81 Fed. Reg. at 20,830) ("Each operator must evaluate the partial pressure of each corrosive constituent."); *see also* JA609 (Final Rule, 87 Fed. Reg. at 52,270) (imposing monitoring requirements for pipelines "with corrosive constituents in the gas").[3]

[3] PHMSA's final standard added the words "where applicable" and "as necessary" to the third sentence of proposed Section 192.478(a): "An operator must evaluate the partial pressure of each corrosive constituent, *where applicable*, by itself or in combination, to evaluate the effect of the corrosive constituents on the internal

PHMSA's Final Rule also did not analyze the costs or benefits of its corrosive-constituent standard. PHMSA abandoned its preliminary cost-benefit estimate ($400,000 in costs; $900,000 in benefits, *see supra* p. 10), and offered two reasons for omitting a final cost-benefit assessment. First, PHMSA again "assumed" that pipelines "already have the infrastructure in place to comply with § 192.478." JA648 (RIA 25). PHMSA did not respond to INGAA's comment that this assumption was wrong. JA373 (INGAA Comments 117). Second, PHMSA asserted that "precisely how much th[e] compliance costs are is hard to determine because of uncertainties regarding operators' compliance strategies with respect to existing regulations." JA650 (RIA 27). PHMSA did not acknowledge its preliminary cost-benefit assessment or INGAA's cost calculations, JA392 (INGAA Cost Analysis 35)—the very calculations that PHMSA asserted were too difficult to compute.

5. PHMSA denies INGAA's request to reconsider its corrosive-constituent standard.

INGAA petitioned PHMSA for reconsideration, explaining that applying monitoring requirements to corrosive constituents, instead of corrosive gas, improperly departed from GPAC's recommendation without explanation. JA686

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corrosion of the pipe and implement mitigation measures *as necessary*." *Compare* JA609 (Final Rule, 87 Fed. Reg. at 52,270), *with* JA112 (NPRM, 81 Fed. Reg. at 20,830). Otherwise, the proposed and final sentences are identical.

(Petition for Reconsideration 11). INGAA also highlighted (again) that PHMSA's assumption that pipelines already had the necessary monitoring equipment in place was incorrect, making the costs far greater than PHMSA assumed. JA688 (Petition for Reconsideration 13).

PHMSA refused to change its standard. It asserted that it "account[ed] for" GPAC's recommendations, even while acknowledging that its standard requires pipelines to monitor corrosive constituents, not just corrosive gas. JA715 (PHMSA Letter 10). PHMSA also re-asserted, again without evidence and in the face of INGAA's contrary statements, that the costs of its new monitoring requirements were minimal because only a fraction of pipelines would have to take on new "monitoring and mitigation measures." *Id.*

B. PHMSA's new high-frequency electric resistance welded pipe standard ("HF-ERW standard").

Second, PHMSA's Final Rule amends 49 C.F.R. § 192.714(d)(1)(iv) and § 192.933(d)(1)(iv) to treat metal loss on the seams of low-frequency *or* high-frequency electric resistance welded (ERW) pipe as a condition that must be immediately repaired (known as an "immediate repair condition"). JA610-611, JA616 (Final Rule, 87 Fed. Reg. at 52,271-72, 52,277).

1. Technical background.

There are several different ways to manufacture the pipe used in natural-gas pipelines. *See* PHMSA, *Fact Sheet: Pipe Manufacturing Process* (Dec. 1, 2011).[4] One option is ERW pipe. ERW pipe is manufactured by passing an electric current between the two edges of the steel "to form a bond without the use of welding filler material." *Id.* There are two types of ERW pipe. Low-frequency ERW (LF-ERW) uses a low frequency A.C. current to heat the seam of the pipe. *Id.* High-frequency ERW (HF-ERW) uses a high frequency A.C. current. *Id.*

LF-ERW was used from the 1920s until approximately 1970. *Id.* As PHMSA has explained, "[o]ver time, the welds of low frequency ERW pipe [were] found to be susceptible to selective seam corrosion, hook cracks, and inadequate bonding of the seams, so low frequency ERW is no longer used to manufacture pipe." *Id.* The "high frequency process is still being used to manufacture pipe." *Id.*

Metal loss can occur on the seams of both HF-ERW and LF-ERW. *See generally* PHMSA, *Fact Sheet: Pipe Defects and Anomalies* (Dec. 1, 2011).[5]

[4] https://tinyurl.com/55mdnj4n

[5] https://tinyurl.com/32xp2dxt

Metal loss is the thinning of the pipeline wall "due to internal or external corrosion." *Id.*

Prior to this rulemaking, metal loss in LF-ERW seams, but not HF-ERW seams, required an "immediate response" from pipeline operators. JA363 (INGAA Comments 91). PHMSA's regulations expressly incorporate industry manual ASME/ANSI B31.8S-2004 by reference.[6] *See* 49 C.F.R. § 192.7(c)(6). Section 7.2.1. of that manual considers metal loss affecting LF-ERW seams, but not HF-ERW seams, an "immediate repair condition." JA363 (INGAA Comments 91) (citing ASME/ANSI B31.8S-2004, *Managing System Integrity of Gas Pipelines* 20, Section 7.2.1). A pipeline must begin repairing or removing an "immediate repair condition" within 5 days of detecting it.[7]

2. PHMSA proposes to treat metal loss in the seams of HF-ERW pipe as an immediate repair condition.

PHMSA's 2016 NPRM proposed changing 49 C.F.R. § 192.713(d)(1)(iv) and § 192.933(d)(1)(v) to require pipeline operators to immediately repair any metal loss affecting seams of *either* high-frequency *or* low-frequency ERW.

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[6] ASME is the American Society of Mechanical Engineers. *See* https://webstore.ansi.org/sdo/asme (last visited Dec. 2, 2023). It is accredited by the American National Standards Institute (ANSI) to issue pipeline design and inspection standards. *Id.*

[7] PHMSA, *Final Gas IM FAQs*, FAQ-215 pp. 36-37, (Aug. 26, 2021), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-09/Final%20GAS%20IM%20FAQs%208-26-21.pdf

JA128 (NPRM, 81 Fed. Reg. at 20,846). To justify this proposal, PHMSA stated that "line pipe manufactured using *low frequency electric resistance welding* is susceptible to seam failure." JA10 (NPRM, 81 Fed. Reg. at 20,728) (emphasis added). PHMSA never discussed or alluded to risks associated with HF-ERW. PHMSA's accompanying PRIA asserted only that its new standard would not "impose an additional cost burden on pipelines" because, it said, the new standard "relax[es]" the requirements existing at the time. JA211-212 (PRIA 73-74). There was no further analysis.

3. PHMSA ignores INGAA's comments and finalizes its proposed standard.

INGAA and others explained to PHMSA that metal loss in *high-frequency* ERW pipe (unlike low-frequency) should not be treated as an immediate repair condition. By requiring immediate repair of metal loss in HF-ERW seams, PHMSA's proposed standard would divert pipeline resources and "slow the response to conditions that represent a higher risk to the public and the environment." JA364 (INGAA Comments 92); *see also* JA693 (Petition for Reconsideration 18) (this standard requires operators to "prioritize and direct resources to pipe with HF-ERW seams, when those resources may be more effectively directed to pipe that poses much higher risk").

INGAA's comment letter highlighted that "PHMSA has not explained or provided data to support its proposal to treat metal loss associated with high-

frequency electric resistance welded seams as an immediate repair condition." JA363-364 (INGAA Comments 91-92). INGAA also filed a joint letter with the American Gas Association, American Petroleum Institute, and American Public Gas Association—other owner-operators of gas transmission pipelines—stating that they collectively had "identified zero incidents related to [metal loss] affecting the long seam of HF-ERW pipe from 2010 – 2017." JA549 (June 6, 2018 Joint Comment Letter 10) (AR PHMSA-2011-0023-0451). The associations explained that "[i]t is well-established that HF-ERW pipe is not susceptible to threats like some pre-1970s LF-ERW seam types," and on that basis requested that PHMSA "remove" metal loss to HF-ERW pipes as a new immediate repair condition. *Id.* INGAA also informed PHMSA that metal loss in HF-ERW pipe was *not* considered an immediate repair condition under existing regulations and industry standards, JA363-364 (INGAA Comments 91-92), contrary to PHMSA's assertion and the basis for its preliminary cost-benefit justification, JA211-212 (PRIA 73-74).

PHMSA finalized its HF-ERW standard in substantially the same form. JA611, JA616 (Final Rule, 87 Fed. Reg. at 52,272, 52,277 (codifying 49 C.F.R. §§ 192.714(d)(1)(iv), 192.933(d)(1)(iv)). PHMSA's Final Rule asserted that seams in "high-frequency electric resistance welding" are "more likely to fail." JA591, JA600 n.53 (Final Rule, 87 Fed. Reg. at 52,252, 52,261 n.53); *see also* JA600

(Final Rule, 87 Fed. Reg. at 52,261) (asserting that seams formed by HF-ERW are "susceptible to latent manufacturing defects"). PHMSA's final RIA reiterated the same assertion as the PRIA, without acknowledging INGAA's contrary information: The HF-ERW standard would not "impose an additional cost burden" because it expressly codified industry standards that were "already" in place. JA658-659 (RIA 35-36). PHMSA performed no other cost-benefit analysis for its HF-ERW standard.

4. PHMSA denies INGAA's petition for reconsideration.

INGAA petitioned for reconsideration, requesting that PHMSA remove HF-ERW from Sections 192.714(d)(1)(iv) and 192.933(d)(1)(iv)'s reach because the final RIA failed to "account for the costs and benefits of th[at] provision." JA693 (Petition for Reconsideration 18). INGAA also explained that reconsideration was warranted because PHMSA failed to "explain its analysis of the incident data" it relied on to impose the immediate-repair requirement on HF-ERW. *Id.*

PHMSA denied INGAA's request, without responding to INGAA's argument that it failed to perform the necessary cost-benefit analysis. JA716-718 (PHMSA Letter 11-13). PHMSA justified its HF-ERW standard by citing a handful of expert reports—never previously referenced in these proceedings—to assert that HF-ERW pipe "remains subject to similar weld failure mechanisms as

LF-ERW pipe." JA718 (PHMSA Letter 13); *see also* JA717-718 & nn. 26-33 (PHMSA Letter 12-13 & nn. 26-33) (discussing these expert reports).

C. PHMSA's new "predicted failure pressure" standard for pipeline cracks ("1.25-times-MAOP standard").

Third, PHMSA's Final Rule adopts 49 C.F.R. § 192.714(d)(1)(v)(C) and amends § 192.933(d)(1)(v)(C) to require pipelines to immediately repair cracks that carry a predicted failure pressure of less than or equal to 125% of the pipeline's maximum allowable operating pressure (MAOP). JA611, JA616-617 (Final Rule, 87 Fed. Reg. at 52,272, 52,277-78).

1. Technical background.

A pipeline "anomaly" is "an imperfection in the wall of the pipe." PHMSA, *Pipeline Glossary: Anomaly*.[8] Anomalies include dents and corrosion, *id.*, as well as cracks. A "crack" is an unwanted opening or separation in a pipeline wall. PHMSA, *Pipeline Glossary: Cracks*.[9]

Pipelines with anomalies, including cracks, can burst if the gas pressure in that pipeline becomes too high. The predicted failure pressure is the gas pressure at which a pipeline's anomaly would cause the pipeline to burst.

[8] https://primis.phmsa.dot.gov/Comm/glossary/index.htm#Anomaly

[9] https://primis.phmsa.dot.gov/Comm/glossary/index.htm#Cracks

Maximum allowable operating pressure "means the maximum pressure at which a pipeline or segment of a pipeline may be operated." 49 C.F.R. § 192.3. The MAOP is calculated with reference to the pipeline's material, design, and location. *See* 49 C.F.R. §§ 192.619, 192.111.

2. PHMSA's NPRM states it will not raise its 1.1-times-MAOP threshold for immediate repairs.

Under the NPRM's proposed regulations, pipelines would be required to immediately repair any "anomaly" that carried a predicted failure pressure of less than or equal to 1.1 times the pipeline's MAOP. *See* JA121, JA127 (NPRM, 81 Fed. Reg. at 20,839, 20,845) (proposed Sections 192.713(d)(1)(i) and 192.933(d)(1)(i)). This requirement would apply to all anomalies, including cracks.

PHMSA noted that the "majority" of stakeholders "supported no changes to the immediate repair criterion of predicted failure pressure of less than or equal to 1.1 times MAOP." JA38 (NPRM, 81 Fed. Reg. at 20,756). It stated, expressly, that it was "not proposing to change this criterion." *Id.*

3. PHMSA's Final Rule codifies a new 1.25-times-MAOP requirement for cracks.

At the March 2018 GPAC meeting—two years after its notice of proposed rulemaking—PHMSA proposed singling out cracks for the first time. *See* JA539 (PHMSA Slide Presentation to GPAC 160 (Mar. 26-28, 2018)) (AR PHMSA-

2011-0023-0657). PHMSA suggested making it an immediate-repair condition whenever a crack or crack-like anomaly carried a predicted failure pressure less than or equal to *1.25 times MAOP*. *See id.* Pipeline operators would have to immediately repair any crack that would cause a failure *if* that pipeline exceeded its maximum pressure by 25%. GPAC voted to approve PHMSA's recommendation, but instructed PHMSA to "consider" a 1.1-times MAOP threshold—not 1.25—for pipelines that "verif[y]" their tools measuring predicted failure pressure are reasonably accurate. JA545 (GPAC Meeting Final Voting Slides 49 (Mar. 28, 2018)) (advocating for 1.1-times-MAOP "after tool tolerance has been field verified and applied").

PHMSA's Final Rule created 49 C.F.R. § 192.714(d)(1)(v)(C) and § 192.933(d)(1)(v)(C) to impose its new 1.25-times-MAOP requirement for cracks. *See* JA611, JA616-617 (Final Rule, 87 Fed. Reg. at 52,272, 52,277-78). PHMSA stated tersely that it selected 1.25-times-MAOP because its initially-proposed 1.1 threshold was "inadequate." JA587 (Final Rule, 87 Fed. Reg. at 52,248). Its final RIA did not evaluate the costs or benefits of its new 1.25-times-MAOP standard. *See generally* JA624-672 (RIA 1-49); *see also* JA709 n.11 (PHMSA Letter 4 n.11) (acknowledging that PHMSA has never "explicitly discuss[ed]" the "cost-effectiveness" of its 1.25-times-MAOP standard).

4. PHMSA denies INGAA's petition for reconsideration.

INGAA petitioned PHMSA for reconsideration, explaining that the 1.25-times-MAOP standard failed to "consider the factors required under the Pipeline Safety Act," including cost and feasibility. JA685 (Petition for Reconsideration 10). Moreover, INGAA explained, PHMSA failed to "articulate a satisfactory explanation" for why its new 125%-threshold was needed. JA684 (Petition for Reconsideration 9) (citation omitted).

PHMSA denied INGAA's request. PHMSA claimed it was not subject to any "statut[ory] or regulat[ory]" requirement to explicitly discuss the "cost-effectiveness" of its 1.25-times-MAOP requirement. JA709 n.11 (PHMSA Letter 4 n.11). PHMSA also asserted that a targeted cost-benefit analysis for its new 1.25-times-MAOP standard was not "practicable given PHMSA's comprehensive and highly technical regulatory regime." *Id.* PHMSA stated that it settled on its 1.25-times-MAOP metric because it needed a "conservative MAOP-based threshold for immediate repair." JA708 (PHMSA Letter 3). Without elaborating, PHMSA asserted that its final 1.25-times-MAOP threshold was "carefully selected" and "calibrated." *Id.*

D. PHMSA's new standard for Stress Corrosion Cracking Direct Assessments (SCCDA) ("SCCDA-pipeline-segment standard").

Fourth, PHMSA's Final Rule amends 49 C.F.R. § 192.929(b)(3) to require every Stress Corrosion Cracking Direct Assessment, or "SCCDA," to conduct "a

minimum of three direct examinations for SCC [stress corrosion cracking] within the covered pipeline segment." JA615 (Final Rule, 87 Fed. Reg. at 52,276).

1. Technical background

An SCCDA is a process to assess a pipeline's "stress corrosion cracking" (SCC)[10] by performing an excavation of the area surrounding the pipeline. 49 C.F.R. § 192.929(a). After excavating, the SCCDA "gather[s] and analyz[es] excavation data," such as the surrounding soil quality, the presence of in-ground contaminants, and the condition of the pipe itself, to determine if a pipeline is experiencing SCC. *Id.* PHMSA refers to each excavation and analysis of excavation data as a "direct examination." JA583 (Final Rule, 87 Fed. Reg. at 52,244).

Although PHMSA has never defined the term, "SCC segment" most naturally refers to the pipeline segment being examined under a given SCC Direct Assessment. *See* JA701-702 (Petition for Reconsideration 26-27).

[10] Stress corrosion cracking "produces a marked loss of pipeline strength with little metal loss." *See* PHMSA, *Fact Sheet: Stress Corrosion Cracking* (July 23, 2014), https://primis.phmsa.dot.gov/comm/FactSheets/FSStressCorrosion.htm. It occurs when a pipeline cracks, and weakens, from being "under higher pressures (stress)." *Id.*

2. PHMSA's proposed SCCDA standard.

PHMSA's Notice of Proposed Rulemaking sought to update the standards used to conduct SCCDAs. JA55-56 (NPRM, 81 Fed. Reg. at 20,773-74). PHMSA proposed amending 49 C.F.R. § 192.929(b)(3) to require each SCCDA to "conduct[] a minimum of three direct examinations within the *SCC segment* at locations determined to be the most likely for SCC to occur." JA127 (NPRM, 81 Fed. Reg. at 20,845) (emphasis added). Both GPAC and INGAA supported that proposed amendment. *See* JA543 (GPAC Meeting Final Voting Slides 21 (Dec. 15, 2017); JA379, JA382-383 (INGAA Comments 155, 166-167) (suggesting changes for proposed Section 192.921, but leaving Section 192.929 untouched).

3. PHMSA's final SCCDA-pipeline-segment standard.

Without notice or explanation, however, PHMSA's Final Rule changed that language to instead require each SCCDA to conduct "a minimum of three direct examinations for SCC within the *covered pipeline segment*." JA615 (Final Rule, 87 Fed. Reg. at 52,276) (emphasis added).[11] That language change matters. Many SCC segments have three or four "covered pipeline segments" within them. *See* JA701-702 (Petition for Reconsideration 26-27). PHMSA's Final Rule even

[11] Section 192.903 defines "covered segment" as "a segment of gas transmission pipeline located in a high consequence area." JA582 (Final Rule, 87 Fed. Reg. at 52,243). The boundaries of a covered segment are "determined by population density and other consequence factors." *Id.*

appeared to acknowledge that. *See* JA615 (Final Rule, 87 Fed. Reg. at 52,276) (Section 192.929(b)(1): noting a single SCCDA must "collect and evaluate data for *all* covered pipeline segments" being assessed (emphasis added)). Thus, PHMSA's change could triple or quadruple the number of direct examinations an operator was required to perform under PHMSA's proposed standard. *See* JA701-702 (Petition for Reconsideration 26-27). PHMSA's Final Rule and final RIA did not evaluate the costs or benefits of requiring this multiplicity of direct examinations per "covered pipeline segment."

4. PHMSA denies INGAA's request for reconsideration.

INGAA petitioned PHMSA for reconsideration, requesting that PHMSA change 49 C.F.R. § 192.929(b)(3) back to the language originally proposed, so that pipelines must perform three direct examinations per "SCC segment," not per "covered pipeline segment." JA701-702 (Petition for Reconsideration 26-27). INGAA explained that PHMSA's late-breaking change could dramatically increase the number of required excavations and that PHMSA had performed no analysis—quantitative or qualitative—to justify that new requirement. *Id.* PHMSA denied INGAA's request, giving no explanation for why the benefits of its new requirement for three excavations within each "covered pipeline segment" outweighed the costs. JA720 (PHMSA Letter 15).

E. PHMSA's new standard requiring a safety factor of 5 for fatigue life assessments ("safety-factor-5 standard").

Fifth, PHMSA's Final Rule amends 49 C.F.R. § 192.712(c)(9) to require every fatigue life assessment for pipeline dents to use a "safety factor of 5 or greater for the assessment interval." JA610 (Final Rule, 87 Fed. Reg. at 52,271).

1. Technical background.

A "dent" is a deformation in a pipeline caused by external forces. JA403 (INGAA Comments, Attach. #9, p. 22). Dents result in pipeline "fatigue," a technical term for "structural degradation" caused by "stress or strain." JA396 (INGAA Comments, Attach. #9, p. 2). If left unchecked, fatigue can cause a pipeline to "fracture," or burst. JA402 (INGAA Comments, Attach. #9, p. 8).

A dent's "fatigue life," which is calculated by performing a fatigue life assessment, refers to the amount of time it would take for the dent to cause the pipeline to fracture. *See* JA610 (Final Rule, 87 Fed. Reg. at 52,271). Fatigue life assessments are assigned a "safety factor" which then determines the dent's "reassessment interval." *Id.* For example, if a fatigue life assessment determines that a dent's fatigue life is 30 years, then a safety factor of 2 would require reassessment (i.e., another fatigue life assessment) within 15 years. A safety factor of 3 would require reassessment within 10 years, and so on.

2. PHMSA's Final Rule requires fatigue life assessments to use a safety factor of 5.

PHMSA did not include any proposal to change the safety factor for fatigue life assessments in its April 2016 NPRM or its accompanying PRIA. At the March 2018 GPAC meeting, PHMSA proposed a number of *new* requirements governing the methods used to assess predicted failure pressure and pipeline strain. JA530-537 (PHMSA Slide Presentation to GPAC 146-153). One such proposal was to require fatigue life assessments for dents to use a safety factor of 2. JA533 (PHMSA Slide Presentation to GPAC 149). GPAC unanimously approved PHMSA's new proposals. JA544 (GPAC Meeting Final Voting Slides 47).

Without warning, PHMSA's final Section 192.712(c)(9) required fatigue life assessments for dents to use a "safety factor of *5 or greater* for the assessment interval." JA610 (Final Rule, 87 Fed. Reg. at 52,271) (emphasis added). That super-sized the safety factor of 2 that GPAC approved in March 2018. PHMSA's Final Rule offered no explanation for why a safety factor of 5 was warranted and provided no assessment of the costs or benefits for its new requirement.

3. PHMSA denied INGAA's petition for reconsideration.

PHMSA's safety-factor-5 standard will require operators to devote key "resources to non-critical safety tasks." JA690 (Petition for Reconsideration 15). With this standard, operators will perform more than twice as many fatigue analysis reassessments "without any discernable safety benefit." *Id.*

INGAA petitioned PHMSA for reconsideration, arguing that PHMSA's new safety-factor-5 standard "was not proposed in the NPRM or discussed by GPAC." *Id.* PHMSA also explained that requiring five fatigue life reassessments before a dent is expected to cause a failure "significantly" increases costs while providing no additional safety benefit at all. *Id.*

PHMSA denied INGAA's request. JA713 (PHMSA Letter 8). It did not defend its failure to include the safety-factor-5 standard in its NPRM. It declined to revise that safety factor because, it stated, a 2020 report published by the American Petroleum Institute—never before referenced in these proceedings or discussed at any GPAC meeting—"recommend[ed] use of [safety] factors between 2 and 5." JA713-714 (PHMSA Letter 8-9). PHMSA also offered that if an operator "has a safety-based rationale" for using a lower safety factor, the operator "may seek PHMSA permission to use that lower reassessment safety factor." JA714 (PHMSA Letter 9).

* * *

PHMSA's Final Rule makes changes to hundreds of standards in the Federal Pipeline Safety Regulations. INGAA challenges just five: (1) the corrosive-constituent standard; (2) the HF-ERW standard; (3) the 1.25-times-MAOP standard; (4) the SCCDA-pipeline-segment standard; and (5) the safety-factor-5 standard.

STATUTES AND REGULATIONS

Pertinent statutes and regulations are reprinted in the addendum.

STANDARD OF REVIEW

This Court reviews de novo whether an agency has complied with the APA's procedural requirements for notice and comment. *Sorenson Commc'ns Inc. v. FCC*, 755 F.3d 702, 706 n.3 (D.C. Cir. 2014). De novo review also applies to whether PHMSA has complied with the procedural requirements set forth in its authorizing statute. *See GPA Midstream*, 67 F.4th at 1196-98 (offering no deference to PHMSA's arguments that it properly "[o]bserve[d]" Section 60102(b)'s "[r]ulemaking [p]rocedures").

On the merits, this Court defers to PHMSA's "factual findings and expert judgments," *Sorenson Commc'ns*, 755 F.3d at 706 n.3, but "only if it has adequately explained the basis" for them, *Bluewater Network v. EPA*, 370 F.3d 1, 22 (D.C. 2004). This Court does not "defer" to PHMSA's assertions that it has "satisfied its statutory duty" to conduct a final cost-benefit analysis under Section 60102(b)(5) unless that assertion is adequately explained and "informed." *GPA Midstream*, 67 F.4th at 1199.

SUMMARY OF ARGUMENT

Five standards in PHMSA's Final Rule should be set aside: (1) the corrosive-constituent standard; (2) the HF-ERW standard; (3) the 1.25-times-

MAOP standard; (4) the SCCDA-pipeline-segment standard; and (5) the safety-factor-5 standard. Each is procedurally defective and substantively unreasonable.

I. All of PHMSA's contested standards violate Section 60102(b)'s procedural requirements. *See infra* pp. 35-43. Four of them—the HF-ERW standard, the 1.25-times-MAOP standard, the SCCDA-pipeline-segment standard, and the safety-factor-5 standard—failed to conduct the *preliminary* cost-benefit assessment that Section 60102(b)(3)(B) requires. *See GPA Midstream*, 67 F.4th at 1197-99.

The corrosion-constituent standard violated Section 60102(b)(2)(G)'s requirement that PHMSA "consider" GPAC's recommendations. GPAC recommended that PHMSA "[l]imit the applicability of paragraph (a) [in § 192.478] to the transportation of corrosive gas." JA542 (GPAC Meeting Final Voting Slides 9). The prefatory statements in PHMSA's Final Rule responded that PHMSA would implement GPAC's recommended limitation. JA577 (Final Rule, 87 Fed. Reg. at 52,238). But the Final Rule never did. By failing to implement GPAC's recommendation, or explain why it refused to, PHMSA violated Section 60102(b)(2)(G).

II. PHMSA's 2016 NPRM failed to include its safety-factor-5 and 1.25-times-MAOP standards. *See infra* pp. 44-46. The safety-factor-5 standard, and fatigue life assessments more generally, are not in PHMSA's 2016 NPRM. *See*

JA4-138 (NPRM, 81 Fed. Reg. at 20,722-20,856). That violates the APA's bedrock requirement for PHMSA to provide notice of its proposed rule.

Meanwhile, PHMSA expressly stated that it would not "change" its standard that pipelines must immediately repair anomalies that carry a "predicted failure pressure of less than or equal to 1.1 times MAOP." JA38 (NPRM, 81 Fed. Reg. at 20,756). But then it did, issuing its new and final 1.25-times-MAOP standard. This Court does not permit such "complete turnaround[s] from the NPRM." *CSX Transp., Inc. v. Surface Transp. Bd.*, 584 F.3d 1076, 1082 (D.C. Cir. 2009).

III. On the merits, all of PHMSA's five contested standards were unreasonable. In addition to the *procedural* requirement to provide a preliminary cost-benefit analysis at the NPRM stage, 49 U.S.C. § 60102(b)(3)(B), PHMSA has a *substantive* duty to issue final rules based on its "reasoned determination" that the standard's benefits "justify its costs," 49 U.S.C. § 60102(b)(5); *see GPA Midstream*, 67 F.4th at 1197-1201. PHMSA's Final Rule substantively failed to explain how the benefits justified the costs for *each* challenged standard.

For the corrosion-constituent standard, PHMSA asserted that omitting a final cost-benefit assessment was permissible because only a fraction of pipelines would be impacted by the new standard and, alternatively, because costs were too difficult to quantify. JA648, JA650 (RIA 25, 27). PHMSA made similar

assertions in *GPA Midstream*, and this Court rejected them. 67 F.4th at 1200; *see infra* pp. 48-51.

For the HF-ERW standard, PHMSA asserted that its new standard imposed no new costs because pipelines were already complying with it. JA658-659 (RIA 35-36). That assertion was contradicted in the record, JA363-364 (INGAA Comments 91-92), and PHMSA's continued reliance on it was unreasonable. *See infra* pp. 51-55.

For the 1.25-times-MAOP standard, PHMSA's pre-*GPA Midstream* assertion that it had no legal obligation to perform targeted cost-benefit analyses withers away in the post-*GPA Midstream* legal landscape. Moreover, PHMSA unreasonably failed to explain why its 1.25-times-MAOP strikes the right balance between additional immediate-repair costs and safety benefits. *See Bluewater Network*, 370 F.3d at 21; *infra* pp. 55-58.

PHMSA also failed to consider the costs and benefits of its new SCCDA-pipeline-segment and safety-factor-5 standards. *See infra* pp. 58-61. PHMSA's additional justification that operators could seek waivers to go beneath its default safety factor of 5 is also meritless. *See infra* p. 61-62. This Court rejected that argument in *GPA Midstream*, 67 F.4th at 1199, and should do so again now.

STANDING

INGAA's standing is self-evident. INGAA's 26 members are listed on pages (i) and (ii) of this brief, and they are "directly regulated by the Final Rule." *Advocates for Highway & Auto Safety v. Federal Motor Carrier Safety Admin.*, 41 F.4th 586, 594 (D.C. Cir. 2022) (holding Article III associational standing exists under such circumstances).

The record demonstrates that each challenged standard gives rise to "concrete, particularized pocketbook injury" for INGAA's members. *Maine Lobstermen's Ass'n v. National Marine Fisheries Serv.*, 70 F.4th 582, 592 (D.C. Cir. 2023). The corrosive-constituent standard will force INGAA's members to purchase new monitoring equipment that costs "approximately $275,000." JA385 (INGAA Comments 204). The HF-ERW standard will require INGAA's members to "deploy pipeline integrity resources at the expense of higher-risk conditions elsewhere." JA363 (INGAA Comments 91). The 1.25-times-MAOP standard will force operators to immediately repair cracks that would otherwise be safely repaired "in the one to two year timeframe." JA511 (GPAC Meeting Transcript 232 (Mar. 2, 2018) (Carey Statement)) (AR PHMSA-2011-0023-0660). The SCCDA-pipeline-segment standard and the safety-factor-5 standard will require more excavations and more reassessments, respectively—directly increasing operators' costs. JA690, JA701-702 (Petition for Reconsideration 15, 26-27).

INGAA has associational standing because this suit is germane to its purposes and there is no reason individual pipeline operators must participate in it. *Maine Lobsterman's Ass'n*, 70 F.4th at 593; *National Lime Ass'n v. EPA*, 233 F.3d 625, 636 (D.C. Cir. 2000) (germaneness requirement is "undemanding"); *see also, e.g.*, *Lake Carriers' Ass'n v. EPA*, 652 F.3d 1, 5 & n.2 (D.C. Cir. 2011) (holding individual members need not participate where trade association challenged rule for "fail[ure] to consider" compliance costs and failure to provide adequate notice).

ARGUMENT

I. ALL FIVE CONTESTED STANDARDS IN PHMSA'S FINAL RULE VIOLATED 49 U.S.C. 60102'S PROCEDURAL REQUIREMENTS.

Section 60102's rulemaking procedures "are more specific and still more demanding" than those under the Administrative Procedures Act. *GPA Midstream*, 67 F.4th at 1197; *see also id.* at 1192 (explaining PHMSA must follow hybrid "detailed rulemaking procedures" under both Section 60102 and the APA). PHMSA must "identify the costs and benefits associated with [its] proposed standard" in a preliminary risk assessment and then "submit th[e] risk assessment" to GPAC for review and "to the public for comment." *Id.* (quoting 49 U.S.C. § 60102(b)(3)(B), (4)). Moreover, PHMSA's rule "shall consider" GPAC's "comments and recommendations." 49 U.S.C. § 60102(b)(2)(G). All five of PHMSA's contested standards fail to comply with at least one of these requirements.

A. For four contested standards, PHMSA failed to provide the required preliminary cost-benefit analysis.

PHMSA's HF-ERW standard, the 1.25-times-MAOP standard, the SCCDA-pipeline-segment standard, and the safety-factor-5 standard *each* failed to provide a preliminary cost-benefit assessment. That is reason enough to set these standards aside.

GPA Midstream—decided less than a year ago—squarely applies here. In *GPA Midstream*, PHMSA issued a final rule requiring both transmission pipelines (which transport gas and oil long distances) and gathering pipelines (which collect raw gas or crude oil from wells) to install remote-controlled or automatic shut-off valves. 67 F.4th at 1191. PHMSA's preliminary risk assessment, issued with its notice of proposed rulemaking, "contained no data, analysis, or conjecture about the costs and benefits of applying the proposed safety standard to gathering facilities." *Id.* at 1196-98. This Court held that this omission violated Section 60102(b)(3)(B) and Section 60102(b)(4)'s requirements and vacated PHMSA's rule as it applied to gathering pipelines. *See id.* at 1196-99. In the Court's words, by failing "to identify the costs and benefits" of its proposed rule in a preliminary risk assessment, "PHMSA flouted the pipeline safety laws and a cardinal rule of administrative law." *Id.* at 1198.

PHMSA repeated the same error here. *First*, PHMSA's NPRM proposed revising Section 192.933(d)(1)(v) to include its new HF-ERW standard. *See*

JA128 (NPRM, 81 Fed. Reg. at 20,846). Pages 73-74 of PHMSA's accompanying PRIA purported to analyze that standard's costs and benefits. *See* JA211-212 (PRIA 73-74). But all the PRIA stated was that "by limiting the immediate condition to significant selective seam corrosion," PHMSA's new standard was not "impos[ing] additional cost burden[s] on pipeline operators." *Id.* This "significant selective seam weld corrosion" standard, however, refers to a different provision, Section 192.933(d)(1)(vii). *See* JA128 (NPRM, 81 Fed. Reg. at 20,846) (making "[a]ny indication of significant seam weld corrosion" an immediate repair condition). It is different from proposed subsection (v)'s requirement to treat *any* metal loss in seams of HF-ERW pipe as an immediate repair condition—the standard INGAA contests here. *Id.*

Selective seam corrosion and metal loss in the seams of HF-ERW are separate issues. As PHMSA recognizes, selective seam corrosion occurs "along the bond line of low-frequency electric resistance welding (LR-ERW) and electric flash welding (EFW) piping," *not* HF-ERW pipe. *See* PHMSA, *Fact Sheet: Selective Seam Corrosion (SSC)* (Dec. 1, 2011);[12] *see also* JA363 (INGAA Comments 91) ("Corrosion-related metal loss interacting with high-frequency electric resistance weld seams is not subject to selective seam weld corrosion.").

[12] https://tinyurl.com/mwh5ux7u

Because PHMSA's PRIA never analyzed the costs and benefits of its separate (and costly) HF-ERW standard, it failed "to do an adequate risk assessment in time for peer review and public comment." *GPA Midstream*, 67 F.4th at 1197-98.

Second, no cost-benefit analysis was done for PHMSA's 1.25-times-MAOP standard. The 2016 PRIA analyzed the costs and benefits for some of PHMSA's newly proposed "[r]epair [c]riteria," such as requiring that metal loss exceeding 80% of wall thickness be immediately repaired. *See* JA210-211 (PRIA 72-73). But because PHMSA's 1.25-times-MAOP standard was not under consideration at this time (PHMSA disavowed any intention to consider it, *see infra* p. 44-45), PHMSA's PRIA does not mention it. PHMSA's NPRM and accompanying PRIA did not even consider separating cracks out from other anomalies—as the Final Rule later did. *Compare* JA121 (NPRM, 81 Fed. Reg. at 20,839) (proposed Section 192.713(d)(1)(i) applying to any "anomaly" with a predicted failure pressure less than or equal to 1.1-times MAOP), *with* JA611 (Final Rule, 87 Fed. Reg. at 52,272) (final Section 192.714(d)(1)(v)(C)) ("The crack or crack-like anomaly has a predicted failure pressure . . . that is less than 1.25 times the MAOP."). So of course PHMSA did not provide a *preliminary* cost-benefit assessment of its final crack-specific 1.25-times-MAOP standard. That improperly denied the public "a meaningful chance of participating in the rulemaking process." *GPA Midstream*, 67 F.4th at 1197.

Third, the estimated costs and benefits of PHMSA's standard requiring SCCDAs to conduct three examinations *per covered pipeline segment* is also absent in the PRIA. The PRIA asserts that because SCCDAs are not the "typical[]" method for assessing stress corrosion cracking, its new standards would not "impose a significant additional cost burden on pipeline operators." JA209 (PRIA 71). That is insufficient. PHMSA never estimated the additional costs of tripling the number of excavations each SCCDA must perform when those assessments are necessary. Moreover, Section 60102(b)(3)(B) requires PHMSA to estimate the *benefits*, as well as costs, of its new standard, and PHMSA never attempts to do so. PHMSA's change from requiring three excavations per SCC segment to three excavations per covered pipeline segment carried "no economic data or analysis" for the public "to review and analyze." *GPA Midstream*, 67 F.4th at 1194. The pipeline safety laws "require more." *Id.* at 1196.

Fourth, the safety-factor-5 standard—along with the entirety of Section 192.712(c)—is wholly missing from the PRIA. *See generally* JA139-320 (PRIA 1-182). PHMSA first suggested changing its assessment methods at a March 2018 GPAC meeting, JA530-537 (PHMSA Slide Presentation to GPAC 146-153), years after issuing its NPRM. If PHMSA wanted to require fatigue life assessments to use a safety factor of 5, "then it should have said so in time for peer review and public comment." *GPA Midstream*, 67 F.4th at 1197.

To be clear, PHMSA also failed to perform a cost-benefit analysis for these standards when issuing its Final Rule years later. *See infra* Argument III. But even if the Final Rule included such an analysis, PHMSA would still have violated Section 60102(b)(3)(B)'s requirement for a *preliminary* cost-benefit assessment. As *GPA Midstream* teaches, PHMSA is not permitted to "sidestep[] the process of public deliberation required by law," regardless of what cost-benefit analysis its final rule includes. 67 F.4th at 1197.

Finally, INGAA was prejudiced by PHMSA's failure to offer a preliminary cost-benefit assessment because it "has something useful to say" about how the costs of these four contested standards outweighed the benefits. *Id.* at 1199. It explained that the HF-ERW standard will impose significant costs and provide almost no safety benefit because metal loss in HF-ERW seams is not immediately dangerous. JA363-364 (INGAA Comments 91-92). It wrote that there is limited benefit to imposing a safety margin greater than 1.1-times MAOP because other regulations effectively prohibit pipelines from exceeding their MAOPs. JA682-683 (Petition for Reconsideration 7-8). It explained that PHMSA's new SCCDA-per-pipeline-segment standard could triple the number, and associated costs, of excavations. JA701-702 (Petition for Reconsideration 26-27). And lastly, it told PHMSA that the safety-factor-5 standard "significantly increase[s]" costs by more

than doubling the number of required reassessments "without any discernable safety benefit." JA690 (Petition for Reconsideration 15).

B. For the corrosive-constituent standard, PHMSA failed to consider GPAC's contrary recommendation.

Section 60102(b)(2)(G) requires PHMSA to consider GPAC's "comments and recommendations." PHMSA's corrosive-constituent standard failed to do so.

PHMSA's 2016 NPRM proposed to add Section 192.478 to impose new monitoring requirements on any pipeline with "potentially corrosive constituents in the gas," requiring operators to "evaluate the partial pressure of each corrosive constituent." JA112 (NPRM, 81 Fed. Reg. at 20,830) (quoting 49 C.F.R. § 192.478(a)). At the June 2017 GPAC meeting on the proposed standard, GPAC recommended that PHMSA "[l]imit the applicability of paragraph (a) [in § 192.478] to the transportation of corrosive gas." JA542 (GPAC Meeting Final Voting Slides 9). Among other things, GPAC's members explained that the new standard would add little benefit because pipelines already monitor water levels, a key ingredient for corrosive gas. JA474-475 (GPAC Meeting Transcript 210-211 (June 6, 2017)) (Zamarin Statement). GPAC members further requested that PHMSA provide data supporting the proposal. JA414, JA417 (GPAC Meeting Transcript 275, 278 (Jan. 11, 2017) (Campbell and Zamarin Statements)).

But "PHMSA plowed ahead anyway." *GPA Midstream*, 67 F.4th at 1194. As enacted, Section 192.478(a) imposed monitoring requirements on any pipeline

with "corrosive constituents in the gas,"[13] and included the identical requirement to "evaluate the partial pressure of each corrosive constituent." JA609 (Final Rule, 87 Fed. Reg. at 52,270). Neither limits monitoring requirements to "corrosive gas."

PHMSA never explained why it rejected GPAC's recommendation. Instead, the preamble to PHMSA's Final Rule stated, "Based on the comments received [from GPAC and others], PHMSA is revising the scope of proposed § 192.478 in this final rule to limit its applicability to the transportation of corrosive gas." JA577 (Final Rule, 87 Fed. Reg. at 52,238). But it never actually did. PHMSA's letter denying reconsideration confirms that. It acknowledges that Section 192.478(a)'s new monitoring requirements extend beyond "corrosive gas," and into "a variety of gas streams" that contain the "constituents identified in Section 192.478(a)." JA715 (PHMSA Letter 10).

PHMSA was required—and failed—to "consider" GPAC's recommendation to limit Section 192.478(a)'s monitoring requirements to corrosive gas. 49 U.S.C.

[13] In Section 1972.478(a)'s first sentence, PHMSA's final rule dropped the word "potentially" from a pipeline's requirement to monitor "corrosive constituents." *See* JA609 (Final Rule, 87 Fed. Reg. at 52,270). That change is meaningless. "Corrosive constituents" and "potentially corrosive constituents" are both, by themselves, harmless and thus only have the *potential* to corrode. PHMSA's own RIA continued to refer to a pipeline's new obligation to monitor "potentially corrosive constituents," JA637 (RIA 14), underscoring that the NPRM's proposed monitoring requirement was never changed.

§ 60102(b)(2)(G). PHMSA's prefatory (and unfulfilled) statement that it will implement that change, without ever actually implementing it, does not count as consideration. *See Natural Res. Def. Council v. EPA*, 559 F.3d 561, 564-565 (D.C. Cir. 2009) (referring to agency's statements in the rule's preamble, but not reflected in the rule itself, as "a legal nullity").

PHMSA's denial of reconsideration failed to correct that error. It suggested that by including the words "where applicable" and "as necessary," PHMSA somehow responded to GPAC's recommendations. JA715 (PHMSA Letter 10); *see also supra* p. 12 n. 3. Arguably, those "qualifications," *id.*, confirmed that pipelines are not required to mitigate the effects of corrosive constituents, which makes sense: Corrosive constituents are, by themselves, harmless. But neither PHMSA's Final Rule nor its denial of reconsideration implemented GPAC's recommendation to limit a pipeline's *monitoring* requirements to "corrosive gas." JA542 (GPAC Meeting Final Voting Slides 9).

After receiving GPAC's recommendation to limit Section 192.478(a)'s monitoring requirements to corrosive gas, PHMSA had to either change that requirement or reasonably explain why it was departing from GPAC's recommendation to change it. PHMSA did neither, its omission prejudiced INGAA, and this Court should set Section 192.478(a) aside.

II. PHMSA FAILED TO PROPERLY NOTICE THE SAFETY-FACTOR-5 AND 1.25-TIMES-MAOP STANDARDS.

A final regulation "violates the APA[] if it is not a 'logical outgrowth' of the agency's proposed regulations." *Association of Private Sector Colls. & Univs. v. Duncan*, 681 F.3d 427, 442 (D.C. Cir. 2012). Both the safety-factor-5 and 1.25-times-MAOP standards fail that test.

First, PHMSA's safety-factor-5 standard fails the logical-outgrowth test because the NPRM gave "no indication" that it was considering imposing any such standard. *CSX Transp.*, 584 F.3d at 1081. This standard was first discussed (as a *safety-factor-2* requirement) during the March 2018 GPAC meeting. JA533 (PHMSA Slide Presentation to GPAC 149). By never alluding to safety factors or even fatigue life assessments more broadly in its NPRM, PHMSA comes nowhere close to satisfying the APA's demand. *See Daimler Trucks N. Am. LLC v. EPA*, 737 F.3d 95, 100 (D.C. Cir. 2013) (agency failed the logical outgrowth test because its NPRM "offered no indication that it was contemplating" the changes the final rule made to the C.F.R.); *Duncan*, 681 F.3d at 461 (final rules regulating "distance education" were not a logical outgrowth of the proposed rules, which did not "specifically address" distance education).

Second, an agency fails the logical-outgrowth test where its final rule is a "complete turnaround from the NPRM." *CSX Transp.*, 584 F.3d at 1082. PHMSA's 1.25-times-MAOP standard took that forbidden path. The NPRM was

clear: PHMSA was "not proposing to change" its 1.1-times-MAOP threshold for any anomalies, including cracks. JA38 (NPRM, 81 Fed. Reg. at 20,756). But the Final Rule did just that, raising its threshold to immediately repair cracks to 1.25-times-MAOP. JA616-617 (Final Rule, 87 Fed. Reg. at 52,277-78).

That maneuver is on all fours with what this Court rejected in *International Union, United Mine Workers of America v. MSHA*, 407 F.3d 1250, 1259-60 (D.C. Cir. 2005). In *UMW*, the preamble of the agency's proposed rule stated it would "not include a maximum velocity air cap" in its underground coal mine ventilation standard. *Id.* at 1260. But then the final rule "set a velocity cap of 500 feet per minute." *Id.* at 1252. This Court concluded that the final rule was not a logical outgrowth of the proposed rule because, given the agency's disavowal, there was no way for "interested parties to realize that [the Secretary] would consider abandoning her proposed regulatory approach." *Id.* at 1260. The same applies here. After PHMSA expressly stated that it would not change its 1.1-times-MAOP standard, interested parties, including INGAA, had no way of knowing that PHMSA was actually "consider[ing] abandoning" it for cracks. *Id.*; *Environmental Integrity Proj. v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005) (agencies may not "use the rulemaking process to pull a surprise switcheroo on regulated entities"); *see also Allina Health Servs. v. Sebelius*, 746 F.3d 1102, 1108 (D.C. Cir. 2014) (similar).

It makes no difference that these changes were discussed at a GPAC meeting years after the NPRM. As this Court explained in *Duncan*, "the agency must *itself* provide notice of a regulatory proposal," regardless of what other comments or proposals it receives. 681 F.3d at 462. PHMSA's rulemakings are subject to the requirements of *both* the "pipeline safety laws" and "the APA." *GPA Midstream*, 67 F.4th at 1196. The APA's requirement that the NPRM provide "[n]otice of agency action" in a proposed rulemaking is clear. *Daimler Trucks*, 737 F.3d at 95. That requirement is separate from PHMSA's other duties to allow GPAC to review its proposals and to consider GPAC's recommendations. 49 U.S.C. § 60102(b)(2)(G), (b)(4)(A). PHMSA's final safety-factor-5 standard and 1.25-times-MAOP standard were not logical outgrowths of the standards PHMSA proposed in its NPRM. Those standards should be vacated for this reason alone. *See Allina Health*, 746 F.3d at 1110 ("deficient notice is a 'fundamental flaw' that almost always requires vacatur" (quoting *Heartland Reg'l Med. Ctr. v. Sebelius*, 566 F.3d 193, 199 (D.C. Cir. 2009)).

III. ON THE MERITS, ALL OF PHMSA'S CONTESTED STANDARDS ARE UNREASONABLE AND SHOULD BE VACATED.

PHMSA's final standards must be based on a "reasoned determination" that the benefits "justify" their costs. 49 U.S.C. § 60102(b)(5); *see also GPA Midstream*, 67 F.4th at 1199-1201. Because the final versions of PHMSA's five contested standards *all* violated that requirement, its standards are unreasonable.

That substantive error is distinct from PHMSA's procedural failure to offer a preliminary cost-benefit in its PRIA. *See supra* Argument I.A. 49 U.S.C. § 60102(b)(3)(B) requires PHMSA to "identify the costs and benefits associated with the *proposed* standard." (emphasis added); *see also GPA Midstream*, 67 F.4th at 1196-98 (faulting PHMSA for failing to follow this procedural requirement). Separately, Section 60102(b)(5) requires any *final* standard to be based on the agency's "reasoned determination that the benefits, including safety and environmental benefits, of the intended standard justify its costs." *See also GPA Midstream*, 67 F.4th at 1199-1201 (faulting PHMSA for failing to follow this substantive requirement). Here, PHMSA flouted each of these two distinct statutory requirements (one procedural, one substantive)—just as it did in *GPA Midstream*.

Several of PHMSA's contested standards have additional substantive defects. The HF-ERW standard fails to consider the "probability" of metal loss causing failure in HF-ERW seams, as *GPA Midstream* requires. *Id.* at 1201. The 1.25-times-MAOP standard fails to explain why 1.25-times is the right number, focusing exclusively—and unreasonably—on why 1.1-times-MAOP is the *wrong* number. And PHMSA's defense that pipelines may apply for an exemption from its safety-factor-5 standard is foreclosed under *GPA Midstream*. *Id.* at 1199. Any

one of these additional reasons independently renders the contested standards unreasonable.

A. The corrosion-constituent standard failed to consider costs.

When PHMSA first proposed its corrosion-constituent standard, it estimated a total cost of $400,000, *see* JA229 (PRIA 91), and total benefits of $900,000, JA264-265 (PRIA 126-127). INGAA informed PHMSA that its cost estimate was wildly low; the proposed corrosion-constituent standard, INGAA calculated, would cost more than $75,000,000. JA385 (INGAA Comments 204); JA392 (INGAA Cost Analysis 35). INGAA informed PHMSA that these requirements "will increase costs without increasing safety." JA368 (INGAA Comments 112).

PHMSA did not address that analysis. Nor did it attempt to defend its preliminary cost-benefit assessment. PHMSA simply disclaimed the responsibility to conduct any cost-benefit analysis *at all*. PHMSA offered two reasons in support, and neither has merit.

First, PHMSA's final RIA asserted that because it "assume[s]" most pipelines "already have the infrastructure in place to comply" with its corrosive-constituent standard, the costs are not worth fully analyzing. JA648 (RIA 25); JA715 (PHMSA Letter 10) (asserting the same assumption). For starters, PHMSA's assumption is contradicted by the record. INGAA told PHMSA that its corrosion-constituent standard would require new equipment to be installed at 830

receipt points, JA392 (INGAA Cost Analysis 35); *see also* JA384-385 (INGAA Comments 203-204). PHMSA never responded to, much less incorporated, INGAA's on-the-ground figures. By relying on the same unsupported (and now contradicted) assumption, PHMSA committed a textbook case of unreasonable decisionmaking. *See Motor Vehicle Mfrs. Of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (action is arbitrary and capricious if agency "offered an explanation for its decision that runs counter to the evidence before the agency"); *Genuine Parts Co. v. EPA*, 890 F.3d 304, 308 (D.C. Cir. 2018) (vacating EPA's final rule where agency "ignored evidence undercutting its conclusion"); *Sorenson Commc'ns*, 755 F.3d at 708 (vacating rule that relied on "unsubstantiated conclusion[s]").

Even assuming PHMSA's assumption was true, its explanation would still violate Section 60102(b)(5)'s requirement that the rule's benefits justify its costs. In *GPA Midstream*, PHMSA also asserted that because "few gathering pipelines will be subject to [its new] rule," a full cost-benefit analysis was unnecessary. 67 F.4th at 1200. This Court held that was "inadequate." *Id.* "The relevant question under the law," this Court explained, is "whether the benefits of [PHMSA's regulation] justify the costs," and PHMSA is required to "answer[]" it. *Id.* Asserting that the costs of the corrosion-constituent standard are negligible because

only a fraction of pipelines will be affected fails to measure the standard's "benefits" against its "costs," as Section 60102(b)(5) demands. *Id.*

Second, PHMSA asserted that "precisely how much th[e] compliance costs are" for its new corrosion-constituent standard was too "hard to determine because of uncertainties regarding operators' compliance strategies with respect to existing regulations." JA650 (RIA 27). That is insufficient. Under Section 60102(b)(5), PHMSA must either conduct the cost-benefit analysis or offer a reasonable explanation for why costs and benefits "cannot reasonably be quantified." *GPA Midstream*, 67 F.4th at 1200; *see also Chamber of Commerce of U.S. v. SEC*, 412 F.3d 133, 143-144 (D.C. Cir. 2005) (rejecting as unreasonable the Commission's explanation for why it could not quantify the costs of its new rule). PHMSA did neither.[14] It did not perform a cost-benefit analysis, and PHMSA's explanation for why quantitative analysis was infeasible ignores that it *already* provided a preliminary cost-benefit assessment for this standard. *See* JA226-229 (PRIA 88-91); *supra* pp. 9-10. INGAA similarly provided its own competing analysis, complete with precise figures and numeric calculations. *See* JA392 (INGAA Cost

[14] In *GPA Midstream*, PHMSA similarly pointed to "the difficulty of quantifying the benefits of the rule in terms of avoided incidents and accidents." Final Brief for Respondents at 46, *GPA Midstream Ass'n v. U.S. Dep't of Transp.* (D.C. Cir. 2023) (No. 22-1148). This Court rejected that rationale in *GPA Midstream*, 67 F.4th at 1200, and should do so again here.

Analysis 35); *supra* pp. 10-11. PHMSA never explains why the costs and benefits of its corrosive-constituents standard could be quantified before, but cannot be quantified now. PHMSA's explanation is unreasonable, and this Court should "not defer to it." *GPA Midstream*, 67 F.4th at 1199.

B. The HF-ERW standard failed to quantify or consider costs, and separately, failed to consider the probability of pipeline failure.

PHMSA's HF-ERW standard violates Section 60102(b)(5)'s cost-benefit assessment requirement for two reasons.

First, the standard fails to quantify, or even reference, the costs of making metal loss in HF-ERW seams an immediate repair condition. INGAA's comments on PHMSA's proposed standard underscored that "PHMSA has not explained or provided data to support its proposal to treat metal loss associated with high-frequency electric resistance welded seams as an immediate repair condition." JA363-364 (INGAA Comments 91-92). And when the Final Rule proved identical to the proposed standard in this respect, INGAA's petition for reconsideration again explained that PHMSA had failed to account "for the costs and benefits of this provision." JA693 (Petition for Reconsideration 18).

Even with that prodding, PHMSA has never done so. PHMSA's Final Rule simply states that "historically, longitudinal seams that are formed by direct-current welding, low-frequency or high-frequency electric resistance welding . . . are more likely to fail. Therefore, PHMSA has determined that more stringent

repair criteria are necessary." JA591 (Final Rule, 87 Fed. Reg. at 52,252). PHMSA offered no further data or analysis.

PHMSA's final RIA, meanwhile, makes a blanket assertion about all of Section 192.933(d)(1)'s revisions, which include new immediate repair requirements for "metal loss defects, stress corrosion cracking, and metal-loss affecting a detected longitudinal seam [i.e., HF-ERW and LF-ERW], and selective seam corrosion." JA658-659 (RIA 35-36). According to PHMSA, all these immediate repair requirements were already in place, so they "imposed [no] additional cost burden on pipeline operators." *Id.* Specifically, PHMSA said that Section 192.933(d)(1) had already required operators to follow "ASME/ANSI B31.8S," an industry safety manual, and that its new rule simply makes requirements in that safety manual "explicit[]." *Id.*

INGAA told PHMSA that was wrong, at least with respect to HF-ERW. Its July 2016 comment letter explained that metal loss on HF-ERW weld seams is "not considered an injurious condition under any known industry standard." JA363 (INGAA Comments 91). INGAA further informed PHMSA that its position was "inconsistent with B31.8S-2004, Section 7.2.1," the same industry manual that PHMSA pointed to, because that manual "does not treat high-frequency electric resistance welded seams as an immediate repair condition." *Id.* PHMSA never responded. Because PHMSA's premise that pipelines were already

treating metal loss in HF-ERW as an immediate repair condition is both wrong and contradicted in the record, PHMSA's continued reliance on it was unreasonable. *See State Farm*, 463 U.S. at 43; *Genuine Parts*, 890 F.3d at 308; *Sorenson Commc'ns*, 755 F.3d at 708.[15]

A proper Section 60102(b)(5) assessment would have estimated how many miles of HF-ERW seam would experience metal loss, how expensive each mile would be to replace, and the number of pipeline failures it would avert (or other benefits it would provide). *See* JA660-664 (RIA 37-41) (performing that analysis for other standards). Without such a quantitative analysis, PHMSA was required to "explain why any unquantified benefits cannot reasonably be quantified." *GPA Midstream*, 67 F.4th at 1200. PHMSA did neither.

Second, PHMSA's expert reports—referenced for the first time in its denial of reconsideration—do not save its HF-ERW standard. JA717-718 (PHMSA Letter 12-13). For starters, agencies are prohibited from backfilling a final rule's record with "entirely new information critical" to the agency's determination. *American Pub. Gas Ass'n v. U.S. Dep't of Energy*, 72 F.4th 1324, 1338 (D.C. Cir.

[15] PHMSA's denial of reconsideration also fails to quantify, or even consider, the costs of its new HF-ERW rule. JA717 (PHMSA Letter 12). It simply asserts that there are *benefits* to making metal-loss in HF-ERW pipe seams an immediate repair condition because such pipe is "vulnerab[le]" to failure. *Id.* PHMSA's letter offers no figures or analysis of the *costs*.

2023). And here, PHMSA's overdue reports are "critical" because they are the only materials PHMSA has *ever* used to justify its HF-ERW standard. *Window Covering Manufacturers Ass'n v. Consumer Prod. Safety Comm'n*, 82 F.4th 1273, 1283 (D.C. Cir. 2023) (supplemental materials were "critical" "because no usable information was provided to the public" during the rulemaking); *American Public Gas Ass'n*, 72 F.4th at 1338 ("new studies and datasets" are critical where they do more than "address[] alleged deficiencies in [any] pre-existing data") (quotation marks omitted).

PHMSA's after-the-fact reliance on these reports is also substantively unreasonable. That HF-ERW *can* theoretically fail, as these reports claim—*but see supra* p. 18 (noting a zero failure rate from 2010 to 2017)—does not mean that it is reasonable to subject HF-ERW welds to immediate-repair requirements. *GPA Midstream* reaffirmed that PHMSA must also consider "the probability" of a failure. 67 F.4th at 1201. By all accounts, LF-ERW is much more *likely* to experience metal-loss weld failures than HF-ERW. Even PHMSA's letter denying reconsideration states that seam failures in HF-ERW occur "admittedly at a lower rate than LF-ERW pipe." JA717 (PHMSA Letter 12). Yet PHMSA asserts that HF-ERW pipe can be subject to same immediate-repair requirements as LF-ERW pipe simply because it "may also be prone to defects." JA718 (PHMSA Letter 13). That is insufficient. PHMSA's cost-benefit assessment must incorporate the

probability that defects in HF-ERW pipe exist and that they will result in actual harm. PHMSA failed to do so, violating *GPA Midstream*'s clear command. 67 F.4th at 1201 (cost-benefit analysis may not "ignore the probability of a rupture").

PHMSA's post-Final-Rule reliance on these reports was unreasonable, and its HF-ERW standard should be vacated.

C. The 1.25-times-MAOP standard failed to consider costs and benefits and, separately, failed to explain why 1.25-times-MAOP strikes the right balance.

PHMSA's 1.25-times-MAOP standard should be set aside for two reasons.

First, PHMSA's Final Rule and final RIA do not mention this standard's costs or benefits at all. PHMSA acknowledges that in footnote 11 of its letter denying reconsideration. *See* JA709 n.11 (PHMSA Letter 4 n.11). PHMSA's failure to contemporaneously offer a "reason[]" for why the benefits of its 1.25-times-MAOP standard justify its costs is sufficient in itself to set it aside. *Department of Homeland Sec. v. Regents or Univ. of Calif.*, 140 S. Ct. 1891, 1909 (2020) ("An agency must defend its actions based on the reasons it gave when it acted.").

PHMSA's letter denying reconsideration argues that there is "no basis in statute or regulation" for it to perform a standard-specific cost-benefit analysis. JA709 n.11 (PHMSA Letter 4 n.11). But Section 60102(b)(5) requires just that. *See GPA Midstream*, 67 F.4th at 1200 (explaining that the same statutory provision

requires a "thorough" cost-benefit assessment for each proposed standard). PHMSA issued its reconsideration-denial letter one month before this Court decided *GPA Midstream*, so it must not have known that it was walking straight into reversible legal error.

Next, PHMSA's footnote states that a "cost-effectiveness" analysis for its 1.25-MAOP-requirement would be "[im]practicable" because PHMSA's "regulatory regime" is too "comprehensive and highly technical." JA709 n.11 (PHMSA Letter 4 n.11). *GPA Midstream* rejected that, too. This Court reiterated that because cost-benefit analysis always "requires making projections," PHMSA must do more than make broad assertions about the unavailability of "detailed" cost-benefit analyses. *GPA Midstream*, 67 F.4th at 1200 (citation omitted). If PHMSA's technical-regulations-are-too-technical rationale were valid, then PHMSA would almost always be able to bypass Section 60102(b)(5)'s mandate—just as it attempted, and failed, to do in *GPA Midstream*.

Moreover, PHMSA makes no effort to explain why such projections were feasible for several of its proposed standards, but not for its 1.25-times-MAOP standard. For other changes to its repair criteria, PHMSA estimates the miles of pipeline impacted by various standards, the cost of performing repairs, and the expected benefits. JA660-664 (RIA 37-41). PHMSA's failure to do so here—

coupled with its failure to reasonably explain *why* calculating such costs was impracticable—was unreasonable.

Second, to pass arbitrary-and-capricious review, PHMSA must state why it selected its "*specific*" 1.25-times-MAOP threshold, not simply why it rejected 1.1-times-MAOP. *Bluewater Network*, 370 F.3d at 21. PHMSA flunks that test, as well. Its Final Rule simply states that 1.1-times-MAOP was insufficiently "conservative" (or "inadequate") without explaining why 1.25 times MAOP is the right threshold. JA587 (Final Rule, 87 Fed. Reg. at 52,248).

That explanation echoes the reasoning that this Court rejected in *Bluewater Network*, 370 F.3d at 21. There, the EPA concluded that advanced emissions technologies could be "applied to no more than 70% of new snowmobiles by 2012" because, the agency said, "snowmobile manufacturers are 'resource constrained.' " *Id.* at 6, 21. This Court held that was unreasonable because the same rationale "could just as well support" any standards "corresponding to 30% or 100% application in that time frame." *Id.* at 21. This Court held that the EPA failed to explain how it "arrived at [its] *specific* [70%] conclusion." *Id.*

The same is true here. PHMSA's explanation that 1.1-times-MAOP was not "conservative" enough, JA587 (Final Rule, 87 Fed. Reg. at 52,248), could justify any threshold between 1.1 and 1.25-times-MAOP, or for that matter, numbers far exceeding 1.25-times-MAOP. Because PHMSA never explained its "*specific*

conclusion" that 1.25-times-MAOP strikes the right balance, its decision to impose that requirement was unreasonable. *Bluewater Network*, 370 F.3d at 21.

PHMSA's letter denying reconsideration posits, without further analysis, that the 1.25-times figure was "carefully selected" and "calibrated." JA708 (PHMSA Letter 3). That justification not only came too late, *Regents of Univ. of Calif.*, 140 S. Ct. at 1909; it is also insufficient. To pass arbitrary-and-capricious review, PHMSA must explain how and why the 1.25-times-MAOP figure was "carefully" "calibrated"—not just offer conclusory assertions saying that it was. *See Environmental Health Tr. v. FCC*, 9 F.4th 893, 909 (D.C. Cir. 2021) ("[A] conclusory and unexplained statement is not the 'reasoned' explanation required by the APA."); *International Union, United Mine Workers v. MSHA*, 626 F.3d 84, 93 (D.C. Cir. 2012) (rejecting a "conclusory statement" that was "unsupported by the rulemaking record").

PHMSA failed to explain why the benefits of its 1.25-MAOP standard justified its costs, and separately, how it arrived at its final figure; this rule, too, should be vacated.

D. The SCCDA-pipeline-segment standard failed to consider costs.

PHMSA's new standard requiring that SCCDAs conduct three excavations per covered pipeline segment, instead of three per SCC segment, fails for the same reason. Because "it is not apparent just how [PHMSA] went about weighing the

benefits against the costs" of this new requirement, this Court should set it aside. *GPA Midstream*, 67 F.4th at 1200.

PHMSA's final RIA mentions its new SCCDA standards (codified at Section 192.929) twice. At page 13, it states that Section 192.929 incorporates industry standards, referred to as NACE SP0206 and NACE SP0204. JA636 (RIA 13). Then, at page 19, PHMSA states that Section 192.929's new requirements impose "negligible" incremental costs because all they do is incorporate these "consensus industry standards." JA642 (RIA 19).

But Section 192.929(b)(3), which codifies the contested SCCDA-pipeline-segment standard, does more than that. It states, "*[i]n addition to NACE SP0204*, the plan's procedures for direct examination must provide for an operator conducting a minimum of three direct examinations for SCC within the covered pipeline segment." JA615 (Final Rule, 87 Fed. Reg. at 52,276) (emphasis added). On the regulation's face, PHMSA's requirement for three examinations per covered pipeline segment does not just incorporate industry standards; it supplements them. PHMSA has never explained how the "benefits" of that new requirement "justify its costs." 49 U.S.C. § 60102(b)(5).

INGAA's petition for reconsideration explained that PHMSA's late-breaking change to requiring three excavations per covered pipeline segment could triple the number of required excavations, and that PHMSA failed to account for

those additional costs in its final RIA.[16] JA701-702 (Petition for Reconsideration 26-27). PHMSA did not perform any cost-benefit assessment to justify *any* number of required excavations. *See* JA642 (RIA 19). That omission is fatal. PHMSA's requirement that each SCCDA perform three excavations per covered pipeline segment should be vacated.

E. The safety-factor-5 standard failed to consider costs and impermissibly relies on waivers.

Finally—and yet again—PHMSA failed to consider costs of requiring fatigue life analysis to use a safety factor of 5, instead of the GPAC-approved safety factor of 2. PHMSA's Final Rule and final RIA contain no analysis of this new requirement. The final RIA does not include the word "fatigue." *See generally* JA624-672 (RIA 1-49). While the final RIA purports to analyze the costs and benefits of changes to Sections 192.712(b) and 192.712(d), JA660 (RIA 37), the safety-factor-5 standard is codified in Section 192.712(c), JA610 (Final Rule, 87 Fed. Reg. at 52,271), and the RIA does not mention that provision.

INGAA's petition for reconsideration explained that PHMSA's safety-factor-5 standard "significantly increase[s]" costs while providing no "discernable

[16] INGAA can proffer that requiring three excavations per covered pipeline segment, as opposed to per SCC segment, produces *no* additional benefit. INGAA was unable to present its own cost-benefit analysis during rulemaking because PHMSA had not noticed this change in its NPRM, or otherwise subjected it to "peer review" and public comment. *GPA Midstream*, 67 F.4th at 1196.

safety benefit." JA690 (Petition for Reconsideration 15). It requested that PHMSA revert back to the safety-factor-2 requirement that GPAC endorsed because "the record contains no basis" for PHMSA's safety-factor-5 standard and because PHMSA failed to analyze the "safety benefit[s]" and costs of its new standard. *Id.*

PHMSA refused for two main reasons. First, it responded that the safety-factor-5 standard was justified by an American Petroleum Institute report—never before referenced—that recommended safety factors between 2 and 5. JA713 (PHMSA Letter 8). But where, as here, a report's factual material is "critical" to the agency's formal decisionmaking, the agency must "test[]" that study "through exposure to public comment." *Chamber of Commerce. of U.S. v. SEC*, 443 F.3d 890, 900 (D.C. Cir. 2006); *see also supra* pp. 53-54.

The API study is the only material that PHMSA has ever cited to support its safety-factor-5 standard, and PHMSA adopted, without qualification, the report's upper limit. JA713 (PHMSA Letter 8). It was critical, and PHMSA's failure to subject it to notice and comment warrants vacatur. *See Window Covering Mfrs. Ass'n*, 82 F.4th at 1283; *American Pub. Gas Ass'n*, 72 F.4th at 1338.

Second, PHMSA asserted that operators could "seek PHMSA permission" to go beneath the default safety-factor-5 standard. JA714 (PHMSA Letter 9). In *GPA Midstream*, PHMSA made the same argument, and this Court rejected it.

This Court held that relying on PHMSA's discretionary waivers would "impermissibly shift the burden of proof to the petitioners and other operators." *GPA Midstream*, 67 F.4th 1199. Then, and now, PHMSA's waiver argument "must [be] reject[ed]." *Id.*

* * *

Each of the challenged standards offers multiple paths to vacatur. The "ordinary practice is to vacate unlawful agency action," *United Steel v. MSHA*, 925 F.3d 1279, 1287 (D.C. Cir. 2019), and this Court should follow that practice here. The "deficiencies" in the five contested standards are "serious[]" and vacatur will not "cause disruption." *Id.* (citation omitted).

To recap: The corrosion-constituent standard should be vacated because PHMSA failed to consider GPAC's recommendation or because the two reasons PHMSA gave for not conducting a targeted final cost-benefit assessment are unreasonable.

The HF-ERW standard should be vacated because PHMSA did not conduct a preliminary cost-benefit assessment, because its Final Rule failed to consider costs, or because its after-the-fact justification failed to consider the probability that HF-ERW pipe would fail.

The 1.25-times-MAOP standard should be vacated because PHMSA did not conduct a preliminary cost-benefit assessment, because PHMSA did not provide

proper notice in its NPRM, because PHMSA's Final Rule did not consider costs, or because PHMSA offered no reasonable explanation for why 1.25-times-MAOP strikes the right balance between additional costs and safety benefits.

The SCCDA-pipeline-segment standard should be vacated because PHMSA did not conduct a preliminary cost-benefit assessment or because its Final Rule failed to consider costs and benefits.

Finally, the safety-factor-5 standard should be vacated because PHMSA did not conduct a preliminary cost-benefit assessment, because PHMSA did not provide proper notice in its NPRM, because PHMSA did not adequately explain why the benefits of a safety factor of 5 justified the costs, or because PHMSA improperly relied on the theoretic availability of waivers to justify this standard.

INGAA, however, does not request vacatur of the entire Final Rule. It requests that this Court sever the Final Rule and issue a "[l]imited [v]acatur," similar to the remedy this Court ordered in *GPA Midstream*. 67 F.4th at 1201-02. INGAA requests that this Court sever and vacate Section 192.478 (corrosion-constituent standard), Sections 192.714(d)(1)(v)(C) and 192.933(d)(1)(v)(C) (1.25-times-MAOP standard), Section 192.929(b)(3) (SCCDA-pipeline-segment standard), and Section 192.712(c)(9) (safety-factor-5 standard), and that it strike the words "or high-frequency" from 49 C.F.R. § 192.714(d)(1)(iv) and § 192.933(d)(1)(iv) (HF-ERW standard). Because these standards "operate[]

entirely independently of one another," they should be severed from the Final Rule and vacated. *American Petroleum Inst. v. EPA*, 862 F.3d 50, 71 (D.C. Cir. 2017) (citation omitted).

CONCLUSION

The petition for review should be granted, and the contested standards should be severed and vacated.

Respectfully submitted,

/s/ Catherine E. Stetson
CATHERINE E. STETSON
SEAN MAROTTA
MATTHEW J. HIGGINS
KEENAN ROARTY
HOGAN LOVELLS US LLP
555 Thirteenth Street, N.W.
Washington, D.C. 20004
(202) 637-5491
cate.stetson@hoganlovells.com

Counsel for Petitioner Interstate Natural Gas Association of America

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CERTIFICATE OF COMPLIANCE

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/s/ Catherine E. Stetson
Catherine E. Stetson

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I certify that on April 1, 2024, the foregoing brief was electronically filed through this Court's CM/ECF system, which will send a notice of filing to all registered users.

/s/ Catherine E. Stetson
Catherine E. Stetson